NETWORK CONTROLLER AND METHOD OF CONTROLLING TRANSMITTING AND RECEIVING BUFFERS OF THE SAME

5   ABSTRACT OF THE DISCLOSURE

In a method of controlling a transmitting buffer and a receiving buffer of a network controller and in a network controller operating under such a method, at least one request for access to a system bus from the transmitting buffer and the receiving buffer is received, and the occupancy level of data in the receiving buffer and the vacancy
10   level of data in the transmitting buffer are determined.   Access to the system bus by the transmitting buffer or the receiving buffer is granted based on the determination result. According to the method and system, buffers in the transmitting path and buffers in the   receiving path are treated as a single virtual transmitting buffer and a single receiving virtual buffer, respectively, and bus priority is determined in consideration of
15   the occupancy level of data in each virtual buffer along with any increase or decrease in the occupancy level.   Therefore, it is possible to effectively prevent or reduce underflow of the transmitting buffer and overflow of the receiving buffer, thereby impartially arbitrating as to which of the transmitting and receiving buffers can access the memory.

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